

**REMARKS**

The Applicant appreciates Examiner Cobanoglu's careful review of this application. Claims 1-30, 44-45, and 49-50 have been cancelled. New Claim 51 has been added to define further features of the applicant's invention.

Upon entry of this amendment, Claims 31-43, 46-48, and 51 remain pending in this patent application. The three independent claims are Claims 31, 41, and 46. Consideration of the present application is respectfully requested in light of the above amendments to the application and in view of the following remarks.

**Claim Rejections Under 35 U.S.C. §112, Second Paragraph**

The Examiner rejected Claim 43 Under 35 U.S.C. §112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. Specifically, the Examiner noted that the "administrative term" recited in Claim 43 did not appear to include or encompass a Mesh and UMLS CUIT terms. The Examiner referenced paragraph [0042] of the published version of the application.

The Applicant appreciates the Examiner's helpful comments and has amended the claims to be consistent with these helpful comments. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

**Claim Rejections under 35 U.S.C. §101**

The Examiner rejected Claims 41-50 under 35 U.S.C. §101 because they are directed to non-statutory subject matter. The Examiner notes that according to new Supreme Court precedent in recent Federal Circuit Decisions, the claimed invention should be (1) tied to another statutory class (such as a particular apparatus) or (2) transform the underlying subject (such as an article or materials) to a different state or thing. The Examiner noted that the previous version of the claims did not appear to recite any apparatus (such as a computer) in the bodies of the claims, which could be used to implement the claim steps.

The Applicant appreciates the Examiner's helpful comments. The Applicant has amended each of the independent claims to include a computer in the body of the claim.

Accordingly, reconsideration and withdrawal of these rejections are respectfully requested.

Claim Rejections Under 35 U.S.C. §§102 and 103

The Examiner rejected Claims 31-50 under 35.U.S.C. §102(b) as being anticipated by U.S. Patent No. 5, 325, 293 issued in the name of Dorne et al. (hereinafter, the “Dorne reference”). The Examiner rejected Claim 33 under 35 U.S.C. §103(a) as being unpatentable over the Dorne reference in view of U.S. Patent No. 6,353,817 issued in the name of Jacobs et al. (hereinafter, the “Jacobs reference”).

The Examiner also rejected Claims 37 and 38 under 35 U.S.C. §103(a) as being unpatentable over the Dorne reference in view U.S. Patent No. 5,809,476 issued in the name of Ryan (hereinafter, the “Ryan reference”). The Examiner rejected Claim 39 under 35 U.S.C. §103(a) as being unpatentable over the Dorne reference in view of U.S. Patent Application Publication No. 2002/0091680 published in the name of Hatzis et al. (hereinafter, the “Hatzis reference”).

The Examiner further rejected claims 41-50 under 35 U.S.C. §103(a) as being unpatentable over the Dorne reference in view of a printed publication entitled, “representing thoughts, words and things in the UMLS,” published by Keith Campbell et al. (hereinafter, the “Campbell publication”).

The Applicant respectfully offers remarks to traverse these pending rejections. The Applicant will address each independent claim separately as the Applicant believes that each independent claim is separately patentable over the prior art of record.

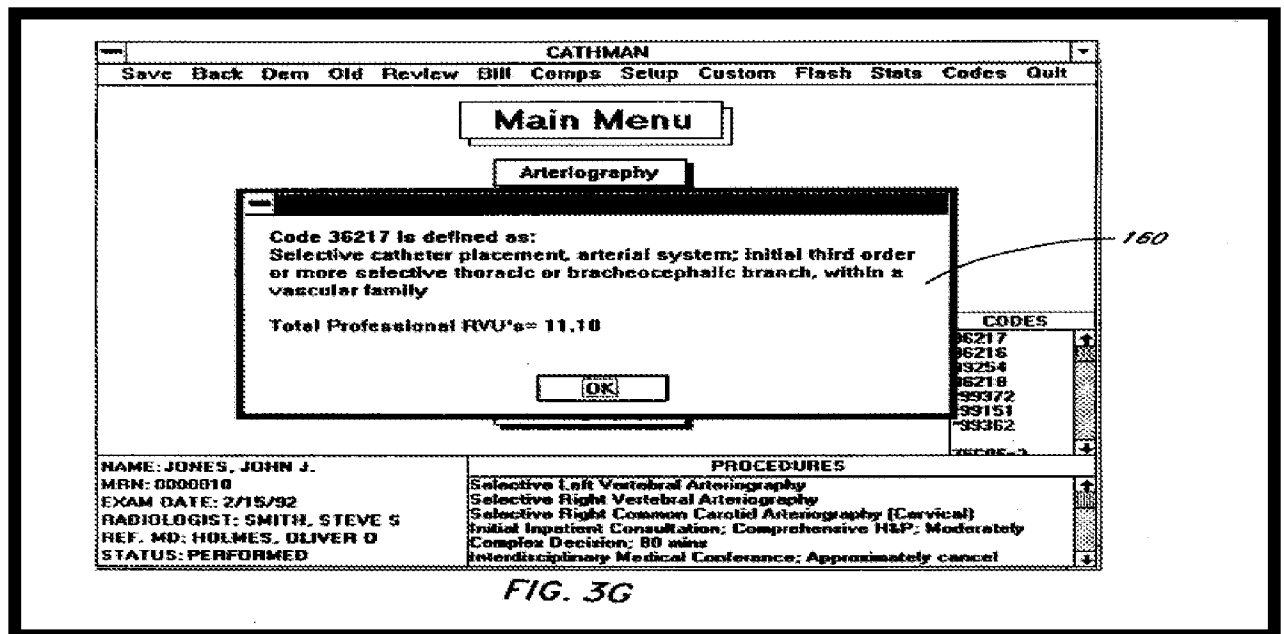
Independent Claim 31

The rejection of Claim 31 is respectfully traversed. It is respectfully submitted that the Dorne, Jacobs, Ryan and Hatzis references and the Campbell publication all fail to describe, teach or suggest a combination of: (1) receiving a selection of a medical concept (2) with a computer for display on the display device; in response to the receiving the selection of the medical concept, the computer: (3) displaying a first image (4) in a first window with the display device comprising (5) an alphanumeric string representing the selected medical concept; (6) displaying one or

more second images with the display device and (7) along one or more respective geometrical rays (8) originating from a central region of the first image, (9) each second image comprising an alphanumeric string representing a parent concept of the selected medical concept and (10) displaying a first symbol on the display device (11) along each respective geometrical ray (12) originating from the central region of the first image; (13) displaying a billing code (14) comprising an alphanumeric string (15) in a second window adjacent to the first window with the display device, (16) the billing code originating from a first medical source associated with the selected medical concept; and (17) displaying a medical code adjacent to the billing code (18) in the second window with the display device, (19) the billing code (20) comprising an alphanumeric string originating from a second medical source (21) that is different from the first medical source and is associated with the selected medical concept, as recited in amended Claim 31.

### The Dorne Reference

Figure 3G of the Dorne reference illustrates an interactive program display that is generated in response to a user clicking on any CPT Code 152 listed in the codes field on the bottom right of the screen display. See Figure 3G of the Dorne reference reproduced below:



The interactive program of the Dorne reference displays a dialog box 160 containing the selected CPT code, as well as the CPT description for the APT code and a total professional RVU value for that code. Specifically, Figure 3G illustrates a dialog box that is displayed by an interactive program if the user clicks on the numbers 36217 code in the displayed codes field 156. The displayed codes field 156 is positioned on the bottom right of the screen display illustrated above. See the Dorne reference, column 7, lines 17-24.

One of ordinary skill in the art recognizes that the Dorne reference displays information in a conventional manner in which related text is merely listed in a new window that does not provide any displays involving related concepts that have predefined spatial relationships. The Dorn reference simply does not provide any teaching of displaying a first image in a first window with the display device comprising an alphanumeric string representing the selected medical concept and displaying one or more second images with a display device and along one or more respected geometrical rays originating from a central region of the first image, each second image comprising an alphanumeric string representing a parent concept of the selected medical concept and displaying a first symbol on the display along each respective geometric ray originating from the central region of the first image, as recited in amendment independent Claim 31.

#### The Jacobs Reference

The Jacobs reference generally provides a system that can create and modify a knowledge base for use in medical decision making. The computer-implemented system can include the user interface for displaying a knowledge base as a hierarchal multiplicity of nodes. Jacobs reference, column 3, lines 5-10. The system of Jacobs can have alternative formats in which to display the nodes, including a multiplicity of grids, an a multiplicity of branches in the form of a logic tree. Jacobs reference, column 3, lines 30-35.

Figure 17C of the Jacobs reference (reproduced below) illustrates one of the nodes that can be displayed. This user interface includes notes references 261 that allow

a user to select one of the members of a list as an alternative to typing in a new note.  
Jacobs reference, column 15, lines 1-10.

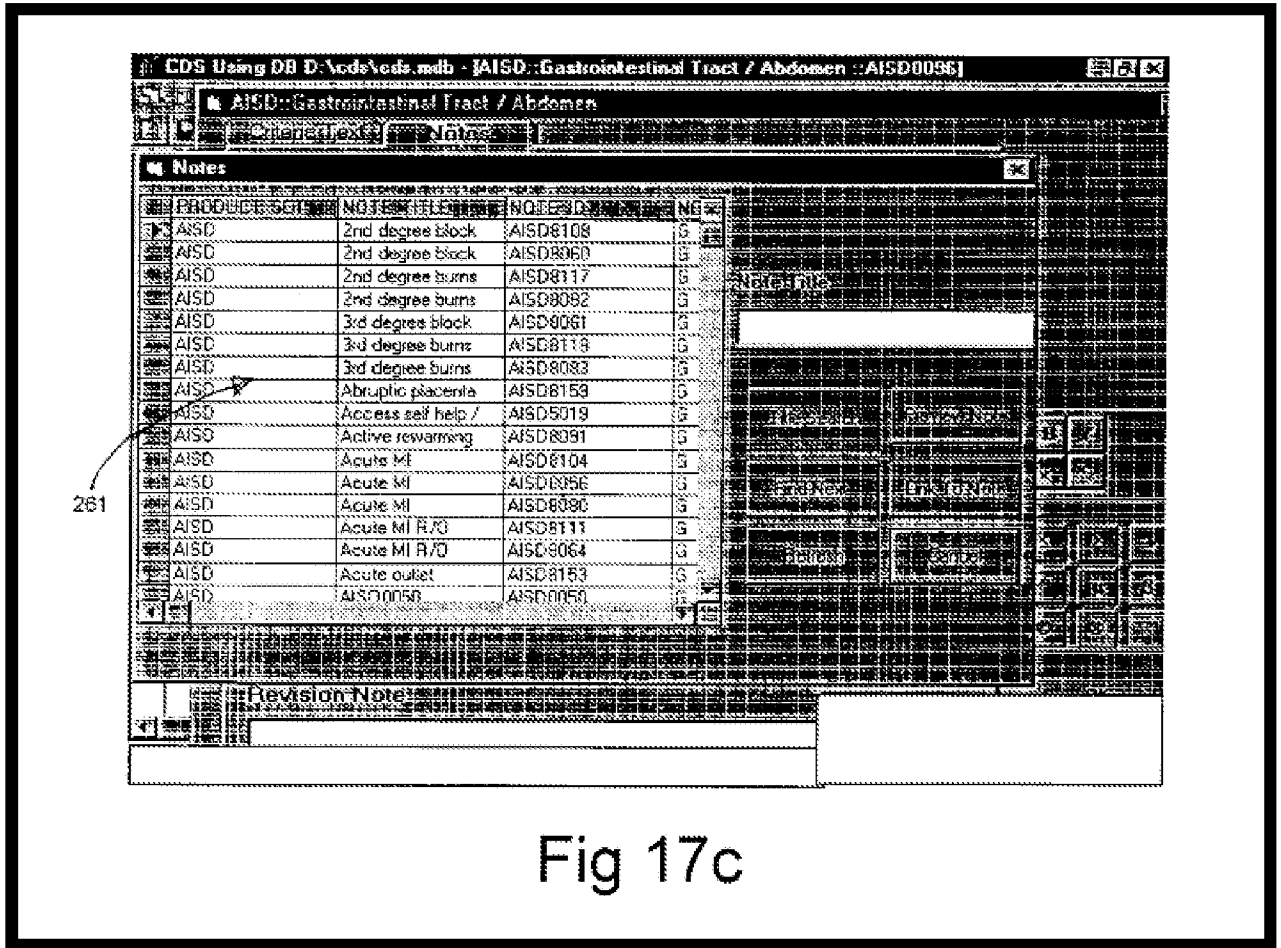
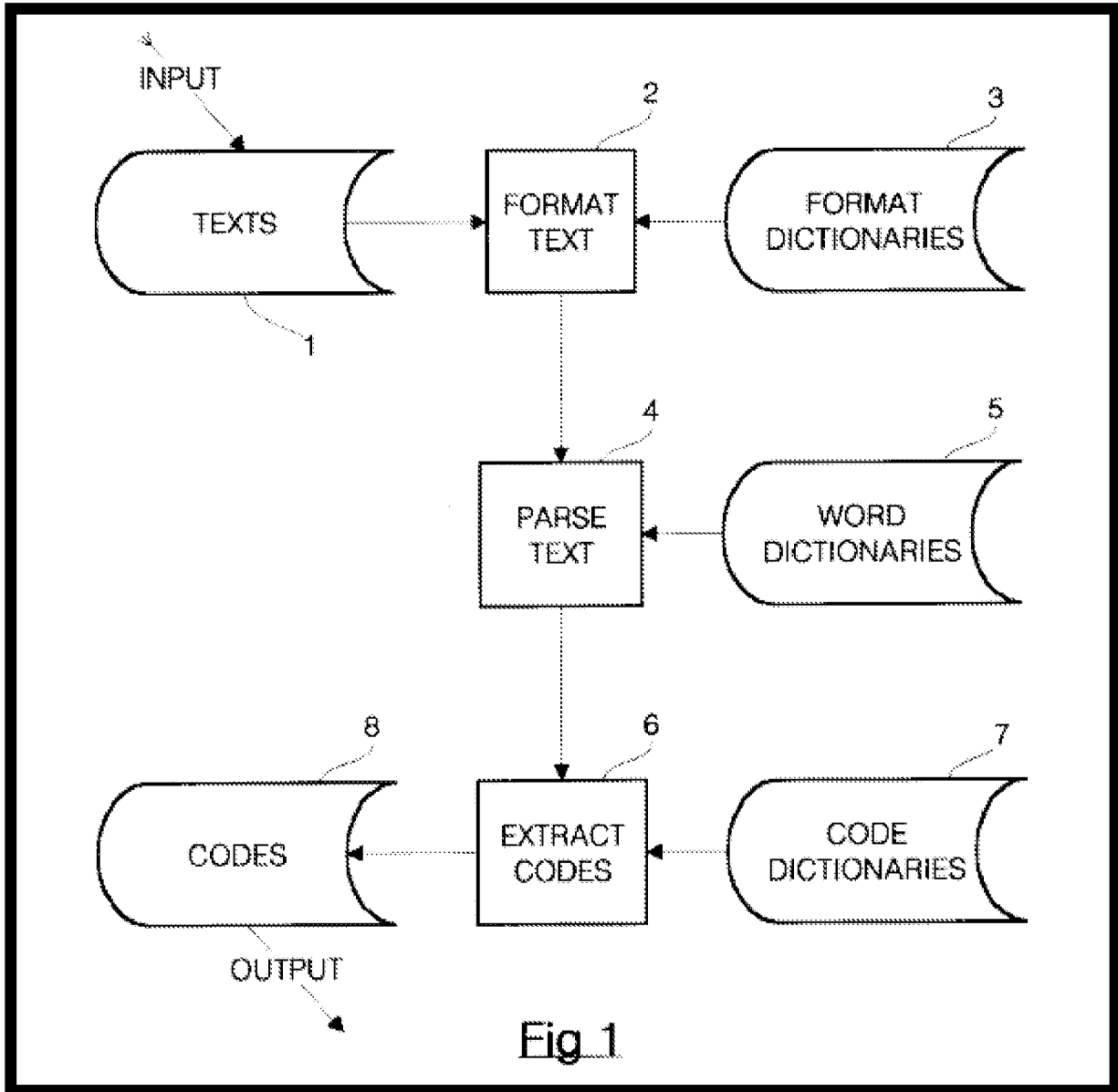


Fig 17c

Like the Dorne reference, one of ordinary skill in the art recognizes that the Jacobs reference does not provide any teaching of displaying a first image in a first window with a display device comprising an alphanumeric string representing a selected medical concept, displaying one or more second images with a display device and along one or more respected geometrical rays originating from a central region of the first image, each second image comprising an alphanumeric string representing a parent concept of the selected medical concept and displaying a first symbol on a display on each respective geometrical ray originating from the central region of the first image, as recited in Independent Claim 31.

### The Ryan Reference

The Ryan reference generally describes a system for coding data. New data to be coded may comprise information relating to an invent, item or operation. Ryan reference, abstract.



Specifically, the Ryan reference explains that text such as from a surgeons notes regarding diagnosis and operations can be input into the flow diagram or program as illustrated in Figure 1 (reproduced above). The process of inputting the text may be way of a typist, typing a surgeons dictated notes subsequent to an operation or may be derived

from optically scanned documents in which case optical character recognition (OCR) could be used. Ryan reference, column 3, lines 4-7.

At block 2 of the flow chart illustrated in Figure 1, the input text is formatted in which most punctuation marks and plural or tense modifiers are removed from the text. In order to assist in formatting the input text, format dictionaries at Block 3 are perused to compare each word being formatted to a list of words in the dictionaries.

Once the text has been formatted it is passed to Block 4 in which the bulk of the analysis of the text is carried out in association with Word dictionaries at Block 5 which contain tables of words which may be compared to the words being analyzed at Block 4. In Block 4, the formatted text is parsed when each word or phrase of the input text is expressed symbolically in the form of an indicative code or sub-part called a “code-snippet”. Eventually, the code-snippets may be altered, depending on the rest of the words in the sentence or clause. The code-snippets are grouped into subgroups or “clusters” representing a sentence, phrase or clause in the input text. Ryan reference, lines 10-45.

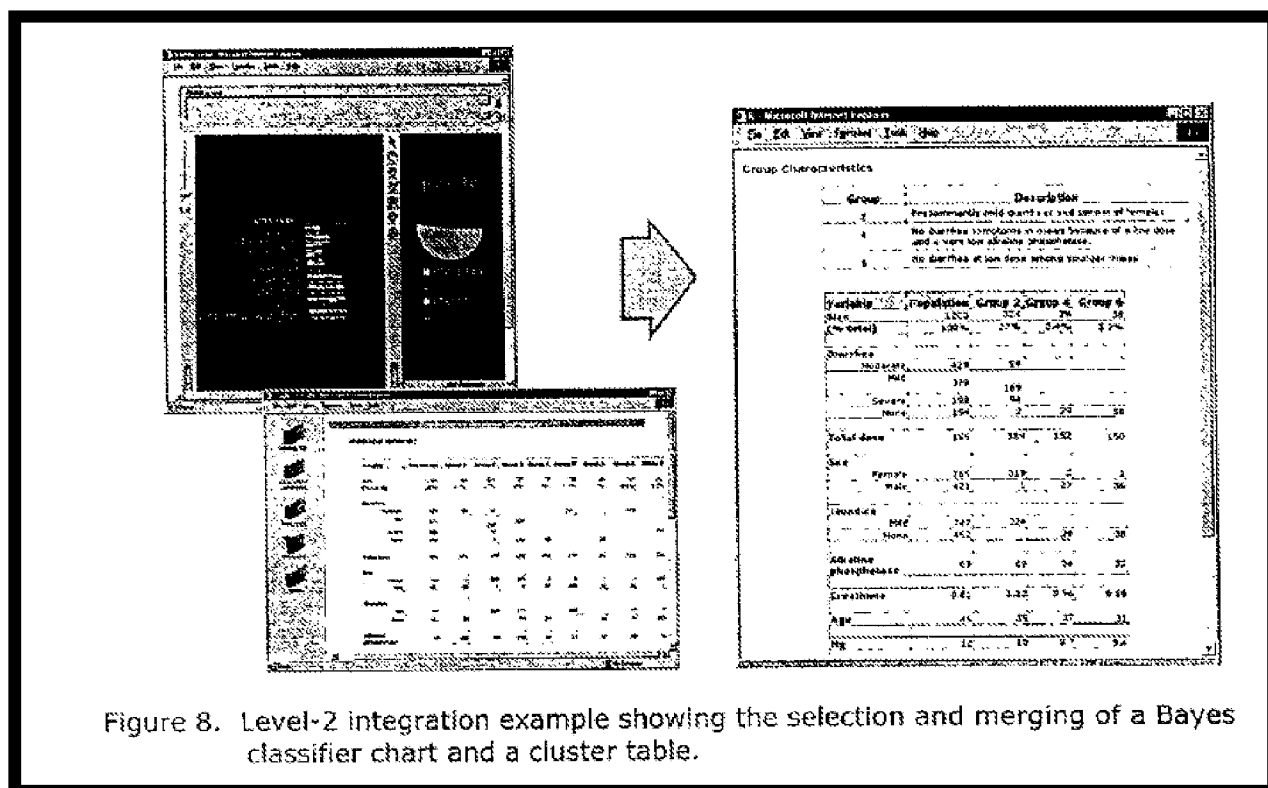
One of ordinary skill in the art recognizes that the Ryan reference, similar to the Dorne and Jacobs references, does not provide any teaching of displaying a first image in a first window with a display device comprising a alphanumeric string representing the selected medical concept, displaying one or more second images with the display device and along one or more respective geometrical rays originating from a central region of the first image, each second image comprising an alphanumeric string representing a parent concept of the selected medical concept in displaying a first symbol on the display device along each respective geometrical ray originating from the central region of the first image, as recited in independent Claim 31.

#### The Hatzis Reference

The Hatzis reference describes a method and system for data integration. The method and system allow integration of data from different formats into a single, integrated format for presentation to user. The method and system can include a relational database for storing records in a taxonomic organization a query-based analysis module for extracting hierarchical patterned records from the relational database, and an

integration module for organizing pattern records into various user-defined formats. Hatzis reference, paragraph 0005.

Figure 8 of the Hatzis reference illustrates a screen shot showing example of a level-2 integration output. The Hatzis reference explains that two-Bayes classifier patterns that represent patterns from consecutive days are reviewed by the algorithm in which the algorithm first looks for changes in the relative order of factors within the pattern. The Hatzis reference explains that factors for which the order has changed are highlighted in a different color in the display. In the next step, the algorithm looks closer within each factor and in this step, it compares the conditional probabilities for each factor range given the value of the outcome and highlights a range that has significantly changed probabilities compared to the previous time point. The results of the comparison are presented in a tabular form as illustrated in Figure 8. Hatzis reference, paragraph 0077.



One of ordinary skill in the art recognizes that the Hatzis reference, similar to the Dorne, Jacobs and Ryan references described above, does not provide any teaching of displaying a first image in a first window with the display device comprises a alphanumeric string representing the selected medical concept, displaying one or more



second images with the display device and along one or more respective geometrical rays originating from a central region of the first image, each second image comprising an alphanumeric string representing a parent concept of the selected medical concept and displaying a first symbol on the display along each respective geometrical ray originating from the central region of the first image, as recited in amended independent Claim 31.

### The Campbell Publication

The Campbell publication describes a framework based on the Ogden-Richards semiotic triangle, for understanding the relationship between the Unified Medical Language System (UMLS) and the source terminologies from which the UMLS derives its content. Campbell reference, abstract.

**Figure 4** Terms from SNOMED that are part of the set of terms designated by the UMLS CUI C0004057 named "Aspirin," and relationships from SNOMED that classify those terms. See Table 1 for a complete list of phrases associated with CUI C0004057.

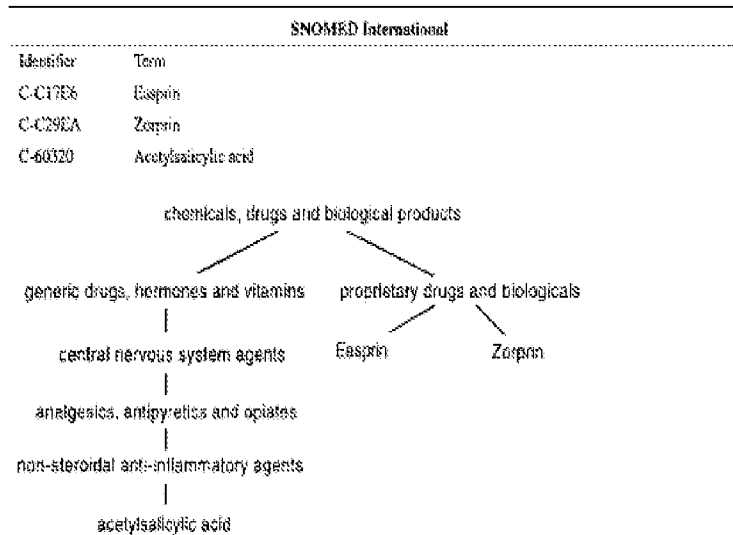


Figure 4 of the Campbell reference illustrates some terms from SNOMED that are part of the set of terms designated by the UMLS CUI C0004057 named, "aspirin." Figure 4 also illustrates the relationships from SNOMED that classify those terms. While it may be argued that the Campbell reference provides some form of images that may relate to medical concepts and parent concepts, one of ordinary skill in the art recognizes that the Campbell reference fails to provide any teaching of displaying a billing code comprising an alphanumeric string in a second window adjacent to the first window containing the first and second images with a display device, where the billing code

originates from the first medical source associated with the selected medical concept, as recited in amended independent Claim 31.

Summary for Independent Claim 31

In light of the differences between amended independent Claim 31 and the Dorne, Jacobs, Ryan, and Hatzis references and Campbell publication pointed out above, one of ordinary skill in the art recognizes that these prior art references, alone or in combination, cannot anticipate or render obvious the recitations as set forth in amended independent Claim 31. Accordingly, reconsideration and withdrawal of the rejection of independent Claim 31 are respectfully requested.

Independent Claim 41

The rejection of Claim 41 is respectfully traversed. It is respectfully submitted that the Dorne, Jacobs, Ryan, and Hatzis references and the Campbell publication, fail to describe, teach or suggest the combination of: (1) receiving a selection of a medical concept (2) with a computer for display on the display device; (3) in response to the selection, the computer: (4) displaying a first image (5) in a first window with the display device (6) comprising an alphanumeric string representing the selected medical concept; (7) displaying one or more second images with the display device (8) and along one or more respective geometrical rays (9) originating from a central region of the first image, (10) each second image comprising an alphanumeric string (11) representing a parent concept of the selected medical concept and (12) displaying a first symbol on the display device (13) along each respective geometrical ray originating from the central region of the first image; (14) displaying a health care management term (15) comprising an alphanumeric string (16) in a second window adjacent to the first window with the display device, (17) the health care management term being associated with the selected medical concept; and (18) displaying a medical procedure (19) comprising an alphanumeric string in a third window adjacent to the first and second windows with the display device, (20) the medical procedure being associated with the first medical concept, as recited in amended independent Claim 41.

Similar to the analysis of independent Claim 31, the Dorne, Jacobs, Ryan, and Hatzis references and the Campbell publication do not provide any teaching of first and second images comprising alphanumeric strings representing concepts in a first window and displaying a healthcare management term comprising an alphanumeric string in a second window adjacent to the first window with a display device, and displaying a medical procedure comprising an alphanumeric string and a third window adjacent to the first and second windows with the displayed device, as recited in amended independent Claim 41.

In light of the difference between Claim 41 and the references mentioned above, one of ordinary skill in the art recognizes that the prior art references, alone or in combination, cannot anticipate or render obvious the recitations as set forth in amended independent Claim 41. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

#### Independent Claim 46

The rejection of Claim 46 is respectfully traversed. It is respectfully submitted that the Dorne, Jacobs, Ryan and Hatzis references and the Campbell publication, fail to describe, teach, or suggest the combination of : (1) receiving a selection of a medical concept (2) with a computer for display on the display device; (3) in response to the selection, the computer: (4) displaying a first image in a first window with the display device (5) comprising an alphanumeric string representing the selected medical concept; (6) displaying one or more second images with the display device and (7) along one or more respective geometrical rays (8) originating from a central region of the first image, (9) each second image comprising an alphanumeric string representing a parent concept of the selected medical concept and (10) displaying a first symbol on the display device (11) along each respective geometrical ray originating from the central region of the first image; (12) displaying a first medical code (13) comprising an alphanumeric string (14) in a second window adjacent to the first window with the display device, (15) the first medical code being associated with the medical concept; (16) displaying a second medical code (17) comprising an alphanumeric string in the second window adjacent to

the first medical code with the display device, (18) the second medical code being associated with the medical concept, as recited in amended independent Claim 46.

Similar to the analysis of independent Claim 31, the Dorne, Jacobs, Ryan and Hatzis references and the Campbell publication do not provide any teaching of first and second images in a first window that comprise alphanumeric strings representing concepts and displaying a first medical code comprising an alphanumeric string in a second window adjacent to the first window and displaying a second medical code comprising an alphanumeric string in the second window adjacent to the first medical code with a display device, as recited in amended independent Claim 46.

In light of the differences between Claim 46 and the references mentioned above, one of ordinary skill in the art recognizes that the prior art references, alone or in combination, cannot anticipate or render obvious the recitations as set forth in amended independent Claim 46. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

Dependent Claims 32-40, 42-43, 47-48, and 51

The Applicant respectfully submits that the above-identified dependent claims are allowable because the independent claims from which they depend are patentable over the cited references. The Applicant also respectfully submits that the recitations of dependent Claims 32-40, 42-43, 47-48, and 51 are of patentable significance. Accordingly, reconsideration and withdrawal of the rejections of dependent claims 32-40, 42-43, 47-48, and 51 are respectfully requested.

**CONCLUSION**

The foregoing is submitted as a full and complete response to the NON-Final Office Action mailed on August 4, 2008. The Applicant and the undersigned thank Examiner Cabanoglu for the consideration of these remarks. The Applicant has submitted remarks to traverse the rejections of Claims 41-50 from the prior art of record. The Applicant respectfully submits that the present application is in condition for allowance. Such Action is hereby courteously solicited.

If any issues remain that may be resolved by telephone, the Examiner is requested to call the undersigned at 404.572.2884.

Respectfully submitted,

**/SPW/**

Steven P. Wigmore

Reg. No. 40,447

December 4, 2008

King & Spalding, LLP  
34<sup>th</sup> Floor, 1180 Peachtree Street, N.E.  
Atlanta, Georgia 30309-3521  
404.572.4600  
K&S Docket: 10125.105002